



**BEFORE THE OFFICE OF ENROLLMENT AND DISCIPLINE
UNITED STATE PATENT AND TRADEMARK OFFICE**

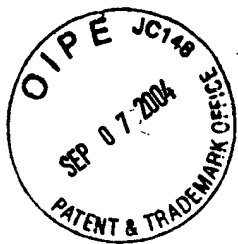
LIMITED RECOGNITION UNDER 37 CFR § 10.9(b)

Mario Cloutier is hereby given limited recognition under 37 CFR, 10.9(b) as an employee of Millenium Pharmaceuticals to prepare and prosecute patent applications wherein Millenium Pharmaceuticals is the assignee of record of the entire interest in the invention claimed in the application. This limited recognition shall expire on the date appearing below, or when whichever of the following events first occurs prior to the date appearing below: (i) Mario Cloutier ceases to lawfully reside in the United States, (ii) Mario Cloutier's employment with Millenium Pharmaceuticals ceases or is terminated, or (iii) Mario Cloutier ceases to remain or reside in the United States on an H-1 visa.

This document constitutes proof of such recognition. The original of this document is on file in the Office of Enrollment and Discipline of the U.S. Patent and Trademark Office.

Expires: March 1, 2005

**Harry I. Moatz
Director of Enrollment and Discipline**



**BEFORE THE OFFICE OF ENROLLMENT AND DISCIPLINE
UNITED STATE PATENT AND TRADEMARK OFFICE**

LIMITED RECOGNITION UNDER 37 CFR § 10.9(b)

Mario Cloutier is hereby given limited recognition under 37 CFR, 10.9(b) as an employee of Millenium Pharmaceuticals to prepare and prosecute patent applications wherein Millenium Pharmaceuticals is the assignee of record of the entire interest in the invention claimed in the application. This limited recognition shall expire on the date appearing below, or when whichever of the following events first occurs prior to the date appearing below: (i) Mario Cloutier ceases to lawfully reside in the United States, (ii) Mario Cloutier's employment with Millenium Pharmaceuticals ceases or is terminated, or (iii) Mario Cloutier ceases to remain or reside in the United States on an H-1 visa.

This document constitutes proof of such recognition. The original of this document is on file in the Office of Enrollment and Discipline of the U.S. Patent and Trademark Office.

Expires: March 1, 2005

**Harry I. Moatz
Director of Enrollment and Discipline**



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231



101306010A

MAY 18, 2000

PTAS

FISH & RICHARDSON P.C.
ANITA L. MEIKLEJOHN
225 FRANKLIN STREET
BOSTON, MA 02110-2804

**UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT**

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 02/29/2000

REEL/FRAME: 010628/0752
NUMBER OF PAGES: 6

BRIEF: MERGER (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

MILLENNIUM BIO THERAPEUTICS, INC.

DOC DATE: 12/21/1999

ASSIGNEE:

MILLENNIUM PHARMACEUTICALS, INC.
75 SIDNEY STREET
CAMBRIDGE, MASSACHUSETTS 02139

SERIAL NUMBER: 08643798
PATENT NUMBER:

FILING DATE: 05/07/1996
ISSUE DATE:

SERIAL NUMBER: 09062391
PATENT NUMBER:

FILING DATE: 04/17/1998
ISSUE DATE:

SERIAL NUMBER: 09283503
PATENT NUMBER:

FILING DATE: 04/01/1999
ISSUE DATE:

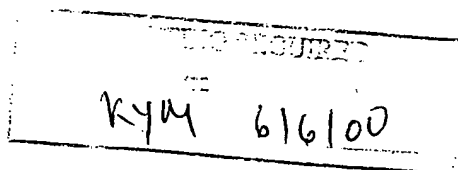
SERIAL NUMBER: 08753007
PATENT NUMBER:

FILING DATE: 11/19/1996
ISSUE DATE:

RECEIVED

JUN 02 2000

**FISH & RICHARDSON, P.C.
BOSTON OFFICE**



SERIAL NUMBER: 09398496
PATENT NUMBER:

FILING DATE: 09/17/1999
ISSUE DATE:

SERIAL NUMBER: 08820364
PATENT NUMBER:

FILING DATE: 03/12/1997
ISSUE DATE:

SERIAL NUMBER: 08843652
PATENT NUMBER:

FILING DATE: 04/16/1997
ISSUE DATE:

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PATENT NUMBER:

FILING DATE: 04/16/1997
ISSUE DATE:

SERIAL NUMBER: 08851160
PATENT NUMBER:

FILING DATE: 05/05/1997
ISSUE DATE:

SERIAL NUMBER: 08966269
PATENT NUMBER: 6046000_J

FILING DATE: 11/07/1997
ISSUE DATE: 04/04/2000

SERIAL NUMBER: 09436183
PATENT NUMBER:

FILING DATE: 11/08/1999
ISSUE DATE:

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PATENT NUMBER:

FILING DATE: 09/03/1998
ISSUE DATE:

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FILING DATE: 08/04/1998
ISSUE DATE:

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FILING DATE: 08/03/1998
ISSUE DATE:

SERIAL NUMBER: 09354809
PATENT NUMBER:

FILING DATE: 07/16/1999
ISSUE DATE:

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PATENT NUMBER:

FILING DATE: 08/06/1998
ISSUE DATE:

SERIAL NUMBER: 09388280
PATENT NUMBER:

FILING DATE: 09/01/1999
ISSUE DATE:

SERIAL NUMBER: 09388279
PATENT NUMBER:

FILING DATE: 09/02/1999
ISSUE DATE:

SERIAL NUMBER: 09057951
PATENT NUMBER:

FILING DATE: 04/09/1998
ISSUE DATE:

SERIAL NUMBER: 09065661
PATENT NUMBER:

FILING DATE: 04/23/1998
ISSUE DATE:

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PATENT NUMBER:

FILING DATE: 06/10/1998
ISSUE DATE:

SERIAL NUMBER: 09143470
PATENT NUMBER: 6043086

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ISSUE DATE: 03/28/2000

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FILING DATE: 11/30/1999
ISSUE DATE:

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FILING DATE: 04/17/1998
ISSUE DATE:

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ISSUE DATE:

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PATENT NUMBER:

FILING DATE: 06/22/1998
ISSUE DATE:

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PATENT NUMBER:

FILING DATE: 08/07/1998
ISSUE DATE:

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ISSUE DATE:

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PATENT NUMBER:

FILING DATE: 09/03/1998
ISSUE DATE:

SERIAL NUMBER: 09145056
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FILING DATE: 09/01/1998
ISSUE DATE:

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PATENT NUMBER:

FILING DATE: 09/30/1998
ISSUE DATE:

SERIAL NUMBER: 09164220
PATENT NUMBER:

FILING DATE: 09/30/1998
ISSUE DATE:

SERIAL NUMBER: 09164169
PATENT NUMBER:

FILING DATE: 10/02/1998
ISSUE DATE:

SERIAL NUMBER: 09201442
PATENT NUMBER: ✓

FILING DATE: 11/30/1998
ISSUE DATE:

SERIAL NUMBER: 09224669
PATENT NUMBER: ✓

FILING DATE: 12/31/1998
ISSUE DATE:

SERIAL NUMBER: 09259387
PATENT NUMBER:

FILING DATE: 02/26/1999
ISSUE DATE:

SERIAL NUMBER: 09298531
PATENT NUMBER:

FILING DATE: 04/23/1999
ISSUE DATE:

SERIAL NUMBER: 09322790
PATENT NUMBER:

FILING DATE: 05/28/1999
ISSUE DATE:

SERIAL NUMBER: 09337930
PATENT NUMBER:

FILING DATE: 06/22/1999
ISSUE DATE:

SERIAL NUMBER: 09342767
PATENT NUMBER:

FILING DATE: 06/29/1999
ISSUE DATE:

010628/0752 PAGE 4

SERIAL NUMBER: 09363630
PATENT NUMBER:

FILING DATE: 07/29/1999
ISSUE DATE:

SERIAL NUMBER: 09369693
PATENT NUMBER:

FILING DATE: 08/06/1999
ISSUE DATE:

SERIAL NUMBER: 09387462
PATENT NUMBER:

FILING DATE: 09/01/1999
ISSUE DATE:

SERIAL NUMBER: 08752307
PATENT NUMBER: 5952171

FILING DATE: 11/19/1996
ISSUE DATE: 09/14/1999

SERIAL NUMBER: 08938365
PATENT NUMBER: 5989909

FILING DATE: 09/26/1997
ISSUE DATE: 11/23/1999

SERIAL NUMBER: 08991426
PATENT NUMBER: 6013257

FILING DATE: 12/16/1997
ISSUE DATE: 01/11/2000

SHAREILL COLES, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

**RECORDATION FORM COVER SHEET
PATENTS ONLY**

Assistant Commissioner for Patents: Please record the attached original document(s) or copy(ies).

1. Name of conveying party(ies):

Millennium BioTherapeutics, Inc.

Additional name(s) attached? ☐ Yes ☒ No

2. Name and address of receiving party(ies):

Millennium Pharmaceuticals, Inc.
75 Sidney Street
Cambridge, MA 02139

3. Nature of conveyance:

- ☐ Assignment
☒ Merger
☐ Security Agreement
☐ Change of Name
☐ Other:

Execution Date: December 21, 1999

Additional names/addresses attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed with a new application, the execution date of the application is:

A. Patent Application No(s):

SEE ATTACHED APPENDIX "A"

B. Patent No(s):

SEE ATTACHED APPENDIX "B"

Additional numbers attached? ☒ Yes ☐ No

5. Name/address of party to whom correspondence concerning document should be mailed:

ANITA L. MEIKLEJOHN, PH.D.
Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110-2804

6. Total number of applications/patents involved: 46

7. Total fee (37 CFR §3.41): \$1,840.00

- ☒ Enclosed
☐ Authorized to charge Deposit Account.

8. Deposit Account No.: 06-1050

Please apply any additional charges, or any credits, to our
Deposit Account No. 06-1050.**DO NOT USE THIS SPACE**9. Statement and Signature: *To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

Anita L. Meiklejohn, Ph.D.

Reg. No. 35,283

Name of Person Signing

Signature

Date

29 FEB 2000

Total number of pages including coversheet, attachments and document: 6

20030370.doc

CERTIFICATE OF MAILING BY EXPRESS MAILExpress Mail Label No. EL228030025US

I hereby certify under 37 CFR §1.10 that this correspondence is being deposited with the United States Postal Service as Express Mail Post Office to Addressee with sufficient postage on the date indicated below and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

February 29, 2000
Date of Deposit

Signature

Samantha Bell
Typed Name of Person Signing Certificate

APPENDIX A

U.S. Patent Application No(s):

08/643,798	09/143,470	09/387,462
09/062,391	09/451,828	
09/283,503	09/062,389	
08/753,007	09/128,155	
09/398,496	09/102,705	
08/820,364	09/131,263	
08/843,652	09/124,538	
08/843,651	09/146,950	
08/851,160	09/145,056	
08/966,269	09/163,523	
09/436,183	09/164,220	
09/146,951	09/164,169	
09/128,709	09/201,442	
09/127,856	09/224,669	
09/354,809	09/259,387	
09/130,491	09/298,531	
09/388,280	09/322,790	
09/388,279	09/337,930	
09/057,951	09/342,767	
09/065,661	09/363,630	
09/065,363	09/369,693	

APPENDIX B

U.S. Patent No(s).

5,952,171

5,989,909

6,013,257

State of Delaware
Office of the Secretary of State

PAGE 1

I, EDWARD J. FREEL, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF OWNERSHIP, WHICH MERGES:

"MILLENNIUM BIOTHERAPEUTICS, INC.", A DELAWARE CORPORATION,
WITH AND INTO "MILLENNIUM PHARMACEUTICALS, INC." UNDER THE
NAME OF "MILLENNIUM PHARMACEUTICALS, INC.", A CORPORATION
ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF DELAWARE,
AS RECEIVED AND FILED IN THIS OFFICE THE TWENTY-FIRST DAY OF
DECEMBER, A.D. 1999, AT 9:30 O'CLOCK A.M.



A handwritten signature in cursive script, reading "Edward J. Freel", is written over a horizontal line.

Edward J. Freel, Secretary of State

2322355 8100M

001016341

AUTHENTICATION: 0201587

DATE: 01-14-00

DEC 20 1999 10:23 FR HALE AND DORR LLP

STATE OF DELAWARE
TO 13826748 SECRETARY OF STATE
DIVISION OF CORPORATIONS
FILED 09:30 AM 12/21/1999
991550845 - 2322355

CERTIFICATE OF OWNERSHIP AND MERGER

MERGING

MILLENNIUM BIOTHERAPEUTICS, INC.
(a Delaware corporation)

INTO

MILLENNIUM PHARMACEUTICALS, INC.
(a Delaware corporation)

Millennium Pharmaceuticals, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "Corporation"), does hereby certify:

FIRST: That the Corporation was incorporated on the 13th day of January, 1993, pursuant to the General Corporation Law of the State of Delaware.

SECOND: That the Corporation owns all of the outstanding shares of the voting stock of Millennium BioTherapeutics, Inc., a corporation incorporated on the 27th day of May, 1997 pursuant to the General Corporation Law of the State of Delaware.

THIRD: That the Board of Directors of the Corporation, at a meeting duly held on the 13th day of October, 1999, duly adopted the following resolutions:

RESOLVED: That, pursuant to Section 253 of the Delaware General Corporation Law, the Corporation is hereby authorized to merge Millennium BioTherapeutics, Inc., a Delaware corporation, of which the Corporation owns 100% of the outstanding voting stock, into the Corporation;

RESOLVED: That the Chief Executive Officer, the President, the Chief Financial Officer, the General Counsel and Secretary or Assistant Secretary of the Corporation be and each hereby is, authorized to execute a Certificate of Ownership and Merger with respect to the merger of Millennium BioTherapeutics, Inc. into the Corporation and to cause the same to be filed with the Secretary of State of Delaware, and to take all such other actions and to execute all such other instruments and agreements as they or any of them may deem appropriate to effect such merger;

RESOLVED: That the merger of Millennium BioTherapeutics, Inc. into the Corporation shall be effective upon the filing of a Certificate of Ownership and Merger with the Secretary of State of Delaware.

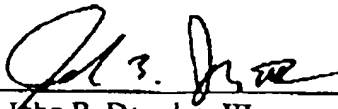
IN WITNESS WHEREOF, Millennium Pharmaceuticals, Inc. has caused this Certificate to be signed by Mark J. Levin as President and attested by John B. Douglas, III as Secretary, this 21st day of December, 1999.

MILLENNIUM PHARMACEUTICALS, INC.

By: 

Mark J. Levin
President

ATTEST:



John B. Douglas, III



094504/079001
UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

DECEMBER 06, 1999

RECEIVED

DEC 10 1999



101151907A

FISH & RICHARDSON P.C.
ANITA L. MEIKLEJOHN
225 FRANKLIN STREET
BOSTON, MA 02110-2804

FISH & RICHARDSON, P.C.
BOSTON OFFICE

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RECORDATION DATE: 09/20/1999

REEL/FRAME: 010249/0546
NUMBER OF PAGES: 2

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

BUSFIELD, SAMANTHA J.

DOC DATE: 08/26/1999

ASSIGNEE:

MILLENNIUM BIOTHERAPEUTICS, INC.
620 MEMORIAL DRIVE
CAMBRIDGE, MASSACHUSETTS 02139

SERIAL NUMBER: 09342767
PATENT NUMBER:

FILING DATE: 06/29/1999
ISSUE DATE:

SHIRLIE SIMON, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

RECEIVED BY

DEC 21 1999

CENTRAL FILES

* No Docketing Required *	
Reviewed By Practice Systems	Initials: <i>[Signature]</i>
Reviewed By Billing Secretary	Initials: _____

09-23-1999

RECORDATION FORM COVER SHEET PATENTS ONLY



Assistant Commissioner for Patents: Please record the attached original document

101151907

1. Name of conveying party(ies):

Samantha J. Busfield

2. Name and address of receiving party(ies):

Millennium BioTherapeutics, Inc.
620 Memorial Drive
Cambridge, MA 02139

Additional name(s) attached? ☐ Yes ☒ No

OPR/FINANCE

3. Nature of conveyance:

- ☒ Assignment
☐ Merger
☐ Security Agreement
☐ Change of Name
☐ Other:

Additional names/addresses attached? ☐ Yes ☒ No

No

Execution Date: August 26, 1999

9.20.99



4. Application number(s) or patent number(s):

If this document is being filed with a new application, the execution date of the application is:

A. Patent Application No.(s):

09/342,767

B. Patent No.(s):

Additional numbers attached? ☐ Yes ☒ No

5. Name/address of party to whom correspondence concerning document should be mailed:

Anita L. Meiklejohn
Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110-2804

6. Total number of applications/patents involved: 1

7. Total fee (37 CFR 3.41): \$40

- ☒ Enclosed
☐ Authorized to charge deposit account

8. Deposit account number: 06-1050

If the fee above is being charged to deposit account, a duplicate copy of this cover sheet is attached. Please apply any additional charges, or any credits, to our Deposit Account No. 06-1050.

09/22/1999 JSHABAZZ 00000067 09342767

01 FC:581

40.00 DP

DO NOT USE THIS SPACE

9. Statement and signature: *To the best of my knowledge and belief, the foregoing information is true and correct and the attached is the original document.*

Anita L. Meiklejohn

Name of Person Signing

Signature

Date

11 SEPT 1999

Total number of pages including cover sheet, attachments, and document: 2

Date of Deposit

September 13, 1999

I hereby certify under 37 CFR 1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

Carrie A. Amos

ASSIGNMENT

For valuable consideration, I, Samantha J. Busfield, of Cambridge, MA hereby assign to Millennium BioTherapeutics, Inc., a Delaware corporation having a place of business at 620 Memorial Drive, Cambridge, MA 02139, and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world, including, without limitation, the right to sue for past infringement, in the inventions and improvements which are subject of an application for United States Patent signed by me, entitled NOVEL MOLECULES OF THE HERPESVIRUS-ENTRY-MEDIATOR-RELATED PROTEIN FAMILY AND USES THEREOF, filed June 29, 1999, and assigned U.S. Serial Number 09/342,767, and I authorize and request the attorneys appointed in said application to hereafter complete this assignment by inserting above the filing date and serial number of said application when known; this assignment including said application, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and I authorize the Assignee to apply in all countries in my name or in its own name for patents, utility models, design registrations and like rights of exclusion, and for inventors' certificates for said inventions and improvements; and I agree for me and my respective heirs, legal representatives and assigns, without further compensation, to perform such lawful acts and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this assignment.

IN WITNESS WHEREOF, I hereto set my hand and seal at Cambridge,
this 28th day of August, 1999
Samantha J. Busfield L.S.
SAMANTHA J. BUSFIELD

STATE OF Massachusetts :
COUNTY OF Middlesex : ss.

Before me this 26th day of August, 1999, personally appeared

Samantha J. Busfield known to me to be the person whose name is subscribed to the foregoing Assignment and acknowledged that he/she executed the same as his/her free act and deed for the purposes therein contained.

Ronda J. Heath
Notary Public

My Commission Expires: 6/10/03

[Notary's Seal Here]